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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,122	07/28/2000	Candice Hellen Brown Elliot	CLRV-001	2606

42304 7590 01/28/2005

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EXAMINER
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WANG, JIN CHENG

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/628,122

### Applicant(s)

ELLIOT, CANDICE HELLEN  
BROWN

### Examiner

Jin-Cheng Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 16-20, 31-39, 42-46 and 51-55 is/are allowed.
- 6) ☒ Claim(s) 6, 11, 21, 26, 40, 41 and 47-50 is/are rejected.
- 7) ☒ Claim(s) 7-10, 12-15, 22-25, and 27-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**SUPPLEMENTAL ACTION*****Response to Amendment***

Applicant has called the Examiner regarding the status of the newly added claims 50-55, filed on 08/05/2004. The claims have not been considered in the last Office Action dated 01/11/2005. Accordingly, this Office Action refers to the last Office Action mailed on 01/11/2005 and addresses the claims 50-55.

***Response to Arguments***

Applicant's arguments dated August 5, 2004 have been considered. Applicant argues with respect to the claim 6 and similar claims that Phan 618 application does not teach, disclose or suggest any such three-color pixel element. In response to the applicant's argument regarding the three-color pixel element, it is found that the claim limitation of the three-color pixel element does not read into the claim 6 because it is only found in the PREAMBLE of the claim 6 rather than in the body of the claim 6. In view of the rejection set forth in the Office action, Phan teaches a pair of red emitters symmetrically disposed about an origin of a rectangular coordinate system having four quadrants in a first pair of opposing quadrants within his display device because *Phan's display system includes a pair of red emitters which he discloses in Figs. 7-12 of the 2003/0218618 which can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Fig. 1c and 2b for a pair of red emitters wherein the dynamic pixel encompasses four or more pixel subcomponents and Figs. 3d and 5 wherein the dynamic pixel encompasses less than four pixel subcomponents and therefore dynamic pixel subcomponents are dynamic in nature, i.e. the composition and structure can be changed.* Phan teaches a pair of green emitters

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symmetrically disposed about origin of rectangular coordinate system in a second pair of opposing quadrants within his display device because *Phan's display system includes a pair of green emitters col. 3, lines 14- 63 and Fig. 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Fig. 1a and 2b for a pair of green emitters wherein the dynamic pixel encompasses four or more pixel subcomponents and Figs. 3d and 5 wherein the dynamic pixel encompasses less than four pixel subcomponents and therefore dynamic pixel subcomponents are dynamic in nature, i.e. the composition and structure can be changed.* Phan teaches a blue emitter disposed at origin of rectangular coordinate system blue emitter having an emitting area larger than that of each red emitters and green emitters within his display device because *Phan's display system includes a pair of green emitters in Figs. 6-8 and 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Figs. 3d and 5 wherein the size of the blue emitter is different from the size of red and green emitter for a static pixel and based on Phan's 2003/0218618, he inherently teaches in the drawings of Figs. 3C and 3d that the size of the blue emitter can be reconfigured and therefore the blue emitter can have an emitting area larger than that of each red emitters and green emitters.* With regards to the claims 40-41 and 47-48, Phan teaches a blue emitter, a pair of red emitters because *Phan's display system includes a pair of red emitters which he discloses in Figs. 7-12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Fig. 1c and 2b for a pair of red emitters wherein the dynamic pixel encompasses four or more pixel subcomponents and Figs. 3d and 5 wherein the dynamic pixel encompasses less than four pixel subcomponents and therefore dynamic pixel subcomponents are dynamic in nature, i.e. the composition and structure*

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*can be changed. Phan teaches a pair of green emitters because Phan's display system includes a pair of green emitters in Figs. 6-8 and 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Figs. 3d and 5 wherein the size of the blue emitter is different from the size of red and green emitter for a static pixel and based on Phan's 2003/0218618, he inherently teaches in the drawings of Figs. 3C and 3d that the size of the blue emitter can be reconfigured and therefore the blue emitter can have an emitting area larger than that of each red emitters and green emitters. Phan teaches that red emitters and green emitters form substantially a checkerboard pattern upon image capture device because Phan's display system includes a pair of green emitters in Figs. 6-8 and 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Figs. 2b and 5 wherein the dynamic pixel encompasses three and four emitters. Based on Phan's 2003/0218618, he inherently teaches in the drawings of Figs. 2b and 5 the dynamic pixels so that the structure and arrangement of the emitters and the number of the emitters can be dynamically reconfigurable for the dynamic pixels.*

Applicant also argues that Phan 618 application is a continuation-in-part application of Serial No. 09/151,287 (now U.S. Patent No. 6,661,429) and the Phan 618 application has a filing date which is later in time than the filing date of the applicant's application. The Examiner asserts that both the U.S. Patent No. 6,661,429 and the Phan 618 cover the same subject matter related to the same invention and the additional drawings in Phan 618 as related to the dynamic pixels (which is taught in the 429 patent) can be used to further illustrate the concept of the reconfigurable emitters within the dynamic pixels. The Office action is based on the materials from the 429 patent.

### *Claim Objections*

Claims 7-10, 12-15, 22-25, 27-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to anticipate or rendered obvious the technical features of claims 7-10, 12-15, 22-25, and 27-30. The prior art fails to teach or suggest green emitters are polygonal each having an inwardly-facing edge parallel to a side of polygonal blue emitter and blue emitter is four-sided having equal internal angles each having corners aligned at x and y axes of rectangular coordinate system.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6, 11, 21, 26, 40-41, 47-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Phan (US application no. 2003/0218618 in reference to the application No. 09/151,287 which is now the U.S. Patent No. 6,661,429).

Re claims 6, 11, 21, and 26, Phan discloses a three-color pixel element for a display comprising

a pair of red emitters symmetrically disposed about an origin of a rectangular coordinate system having four quadrants in a first pair of opposing quadrants (*Phan's display system includes a pair of red emitters which he discloses in Figs. 7-12 of the 2003/0218618 which can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Fig. 1c and 2b for a pair of red emitters wherein the dynamic pixel encompasses four or more pixel subcomponents and Figs. 3d and 5 wherein the dynamic pixel encompasses less than four pixel subcomponents and therefore dynamic pixel subcomponents are dynamic in nature, i.e. the composition and structure can be changed*), a pair of green emitters symmetrically disposed about origin of rectangular coordinate system in a second pair of opposing quadrants (*Phan's display system includes a pair of green emitters col. 3, lines 14- 63 and Fig. 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Fig. 1a and 2b for a pair of green emitters wherein the dynamic pixel encompasses four or more pixel subcomponents and Figs. 3d and 5 wherein the dynamic pixel encompasses less than four pixel subcomponents and therefore dynamic pixel subcomponents are dynamic in nature, i.e. the composition and structure can be changed*), and a blue emitter disposed at origin of rectangular coordinate system blue emitter having an emitting area larger than that of each red emitters and green emitters (*Phan's display system includes a pair of green emitters in Figs. 6-8 and 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Figs. 3d and 5 wherein the size of the blue emitter is different from the size of red and green emitter for a static pixel and based on Phan's 2003/0218618, he inherently teaches in the drawings of Figs. 3C and 3d that the size of the blue emitter can be reconfigured and therefore the blue emitter can have an emitting area larger than*

*that of each red emitters and green emitters and the dynamic pixels are dynamically reconfigurable*). In other words, Phan discloses pixel resolution wherein the static pixels are arranged in a predetermined manner. Based on the figures 10a to 11b of *the 2003/0218618 patent publication*, Phan inherently teaches in Fig. 3c and 3d of the U.S. Patent No. 6,661,429 that the blue emitter being larger than the green or red emitters. The emitters are in rectangular coordinate system. In that he discloses a display comprising rectangular pixels with the resolution increased by formulation of the pixels, with x being the number of horizontal pixels and y the number of vertical pixels. His system adjusts the light emitting area (i.e. pair of green emitters, pair of red emitters, and a blue emitter) and space of different individual elements in a pixel contoured by black mask or barrier ribs of the same structure to optimize the luminance and the brightness of a display.

Re claims 40-41, 47-50, Phan teaches an image capture device substantially comprising a plurality of three-color pixel elements each three-color pixel element comprising a blue emitter, a pair of red emitters (*Phan's display system includes a pair of red emitters which he discloses in Figs. 7-12 of the 2003/0218618 which can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Fig. 1c and 2b for a pair of red emitters wherein the dynamic pixel encompasses four or more pixel subcomponents and Figs. 3d and 5 wherein the dynamic pixel encompasses less than four pixel subcomponents and therefore dynamic pixel subcomponents are dynamic in nature, i.e. the composition and structure can be changed*), and a pair of green emitters (*Phan's display system includes a pair of green emitters in Figs. 6-8 and 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Figs. 3d and 5 wherein the size of the blue emitter is*



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*different from the size of red and green emitter for a static pixel and based on Phan's 2003/0218618, he inherently teaches in the drawings of Figs. 3C and 3d that the size of the blue emitter can be reconfigured and therefore the blue emitter can have an emitting area larger than that of each red emitters and green emitters) such that red emitters and green emitters form substantially a checkerboard pattern upon image capture device (Phan's display system includes a pair of green emitters in Figs. 6-8 and 12 of the 2003/0218618 which is can also be found in Figs. 1a-7 of the U.S. Patent No. 6,661,429, more specifically see Figs. 2b and 5 wherein the dynamic pixel encompasses three and four emitters. Based on Phan's 2003/0218618, he inherently teaches in the drawings of Figs. 2b and 5 the dynamic pixels so that the structure and arrangement of the emitters and the number of the emitters can be dynamically reconfigurable for the dynamic pixels).*

In other words, Phan discloses a square shape pixels comprise regularly disposed dots radiating the basic colors red (red dot), green (green dot) and blue (blue dot). His system displays square static pixels and different sizes and shapes of the dynamic pixels. Static pixel corresponds to a well-known grid pattern or raster of display. The dynamic pixels shown in a circular form. Each dynamic pixel comprises three dots or four dots or more dots encompassing various pixel sub-components including two red emitters or two green emitters. In addition, his system adjusts the light emitting area (i.e. pair of green emitters, pair of red emitters, and a blue emitter) and space of different individual elements in a pixel contoured by black mask or barrier ribs of the same structure to optimize the luminance and the brightness of a display. In that the system is implemented in a dual mode (HDW video mode and Computer text mode) in an HDW enable WebW for internet browsing as well as for watching HDW quality video.

Phan inherently teaches that each emitter is capable of being driven with a variable analog signal because emitters are driven or controlled by the analog voltage signals wherein the instantaneous voltage signals are variable signals. The reasoning is given in the following. The emitter can be activated to drive an image or a portion of the image with a voltage signal in response to the row signal and to drive columns of the emitter substrate with analog voltages corresponding to the image signal. During the time a row line is biased, each column line of the emitter substrate receives an analog row voltage corresponding to an image signal. The emitter set in the column that intersects the biased row will therefore emit light when the column line voltage is sufficiently below the voltage of the biased row line. The intensity of the emitted light will depend upon the voltage of the column line. If the column line voltage is very far below the row line voltage, the pixel will be bright. If the column voltage is not very far below the row line voltage, the pixel will be dim.

Furthermore, Phan also discloses in column 1-2 dynamically reconfigurable pixels for CRT or LCD displays.

***Allowable Subject Matter***

Claims 1-5, 16-20, 31-39, 42-46 and 51-55 are allowed. The following is an examiner's statement of reasons for allowance: The prior art of record fails to anticipate or rendered obvious the technical features of each emitter is connected to a driver and at least two neighboring blue emitters in a row are connected to the same driver.

Furthermore, the prior art of records fails to disclose a fifth column line coupled to fifth column line driver, fifth column line coupled to second red emitter and first green emitter of second

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three-color pixel element. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (703) 605-1213. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw



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